

Application No. 10/533,009
Amendment dated April 9, 2009
Reply to Office Action of November 13, 2008

REMARKS

Entry of the foregoing amendment and reconsideration of this application are requested. Claims 16 and 22 have been amended, claims 17-21 and 30 have been cancelled, claims 31 and 32 are newly added and claims 16, 22-29, 31 and 32 are now pending in the application.

In the Office Action of November 13, 2008, claims 16-24 and 28-30 were rejected under 35 USC §102(b) as being anticipated by Schatz (US Patent No. 5,868,753). Claim 25 was rejected under 35 USC §103(a) as being unpatentable over Schatz in view of Bosley Jr. (US Patent No. 4,930,496). Claim 26 was rejected under 35 USC §103(a) as being unpatentable over Schatz in view of Tsugita et al (US Patent No. 5,910,154). Claim 27 was rejected under 35 USC §103(a) as being unpatentable over Schatz.

Independent claim 16 has now been amended to recite, *inter alia*, a device for retrieval of an intravascular stent from a vessel of a patient. Claim 16 specifies a central shaft received in a central cavity formed by a tubular body of the stent. A balloon support means fixed to and extending from the central shaft is a generally cylindrical sleeve spaced radially from and surrounding the central shaft and extending axially relative thereto to define an annular recess between the sleeve and the central shaft for receiving the tubular body of the stent. A generally annular inflatable balloon means is provided at the free end of the balloon support means. The device is positioned such that the tubular body of the stent to be retrieved is received in the annular recess, an outer surface of the stent is surrounded by the balloon means, and the tip of the central shaft protrudes through the central cavity of the stent. The balloon means is inflated to bear against the outer surface of the stent, thereby to compress the stent and hold the stent between the balloon means and the central shaft such that the stent and the device can be withdrawn together from the vessel.

It is submitted that none of the references show or suggest the structure and function now set forth in claim amended claim 16.

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The Schatz '753 patent is acknowledged for the disclosure of a stent placement and retrieval device shown in Figs. 1-10. Schatz '753 is the primary basis for each of the rejections while Bosley Jr. teaches a catheter provided with a hub and Tsugita et al discloses using inflation fluid of radiographic contrast.

None of the references show or suggest the retrieval device used with an intravascular stent wherein balloon support means take the form of a generally cylindrical sleeve spaced radially from and surrounding a central shaft to define an annular recess between the sleeve and the central shaft for receiving the tubular body of the stent with annular balloon means on a free end of the balloon support means, as set forth in claim 16.

Further, none of the references show or suggest that with the tubular body of the stent received in the annular recess, the tip of the central shaft protrudes through the central cavity of the stent, and the balloon means is subsequently inflated to bear against an outer surface of the stent, thereby to compress the stent and hold the stent between the balloon means and the central shaft such that the stent and the device can be withdrawn together from the vessel.

In contrast with applicant's retrieval device, which is separate from any catheter used in the angioplasty procedure, the Schatz '753 device relies on using the existing stent placement catheter 22 to also retrieve the stent (see column 1, lines 43-60). Inflation of Schatz's chamber 44 or compartment 58 does not ensure a positive gripping of the undeployed stent as compared with the instant invention in which the stent is firmly held between the balloon means and the central shaft. Applicant's spatial relationship between the sleeve and the central shaft allows the body of the undeployed stent to be captured within the claimed recess, and then sandwiched tightly between the balloon means on the sleeve and the central shaft until the stent and the device are withdrawn together from the vessel.

New dependent claim 31 further distinguishes from Schatz '753 by reciting that the central shaft is non-expandable.

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New independent claim 32 recites a kit as discussed on page 6, lines 19-22 of the specification. The subject matter of claim 32 provides that the stent removal device of the present invention can be picked up "off the shelf" as required during an angioplasty procedure and utilized in combination with pre-existing other balloon catheters or other devices in use during the medical procedure.

None of the references shows or suggests a kit such as recited in claim 32 having a guiding catheter and a retrieval device as distinguished above. Claim 32 recites that once the stent and the retrieval device are removed through the guiding catheter and the vessel, the guidewire and the guiding catheter remain in place in the vessel to enable subsequent angioplasty procedures to continue at the same operation without loss of any clinical procedural advantage gained by that stage. It is this aspect in particular which makes the present invention particularly attractive to medical practitioners. Schatz has a different structure and function wherein the placement (balloon) catheter, stent and guidewire are all removed, such that the immediate angioplasty procedure is terminated and any clinical procedural advantage is lost.

Support for the claim language in the amended and new claims is clearly set forth in the drawings or specification as originally filed.

Applicant submits that the claims as amended herein recite structure and function which clearly differentiates from Schatz '753. Bosley Jr. and Tsugita et al fail to rectify the deficiencies of Schatz '753.

Accordingly, it is respectfully requested that the Examiner withdraw the rejections of the claims, and pass this application to issuance with claims 16, 22-29, 31 and 32 being deemed allowable.

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A sincere effort has been made to place this application into condition for allowance, and such action is earnestly requested.

Respectfully submitted,

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